

What is claimed is:

1. A heat transfer device for removing heat energy from a plurality of heat loads, comprising:

a heat exchange structure containing a working fluid in a substantially closed envelope defining at least one evaporator and at least one condenser coupled to provide a circulating path for the working fluid, through vaporization of a liquid phase of the working fluid at the evaporator, condensation of a vapor phase of the working fluid at the condenser, and return of the working fluid from the condenser to the evaporator;

wherein the evaporator defines a reservoir for the liquid phase of the working fluid, and the evaporator comprises at least two spaced evaporation points for application of heat energy from distinct ones of the heat loads, said two spaced evaporation points being commonly supplied with the liquid phase of the working fluid from the reservoir.

2. The heat transfer device according to claim 1, wherein the evaporator consists essentially of an integral vessel comprising thermally conductive material, said spaced evaporation points being located at spaced positions on the integral vessel.

3. The heat transfer device according to claim 1, wherein the reservoir is disposed between said at least two spaced evaporation points.

4. The heat transfer device according to claim 1, wherein the reservoir is coupled to at least one of the evaporation points by a wicking material supporting capillary flow of the liquid phase of the working fluid.

5. The heat transfer device according to claim 1, wherein the reservoir is defined by at least one recessed well in an enclosure defining the evaporator, said evaporation points being located on walls of the enclosure.

6. The heat transfer device according to claim 4, wherein the spaced evaporation points are placed at different positions in the evaporator around the recessed well.

7. The heat transfer device according to claim 6, wherein the spaced evaporation points are placed at different positions around a perimeter of the recessed well.

8. The heat transfer device according to claim 6, wherein the spaced evaporation points are placed at different positions adjacent to the recessed well and at an elevation higher than a bottom of the recessed well.

9. The heat transfer device according to claim 5, wherein the enclosure comprises a chambers radiating from the recessed well and the spaced evaporation points are placed on walls of the chambers.

10. The heat transfer device according to claim 9, wherein the chambers are asymmetrically arranged relative to one another.

11. The heat transfer device according to claim 9, wherein the evaporation points are unevenly distributed in the chambers.

12. The heat transfer device according to claim 11, wherein the evaporation points are spaced to complement uneven ratings of the heat loads for respective ones of the evaporation points.

13. The heat transfer device according to claim 9, wherein at least one of said chambers has at least two of said evaporation points therein.

14. The heat transfer device according to claim 5, wherein at least two of the evaporation points abut the recessed well at stepped edges of an underside of the evaporator, surrounding the recessed well, whereby the evaporation points are supplied commonly from the recessed well, and further comprising a vapor

outlet placed substantially over the recessed well, whereby vapor from the evaporation points diffuses commonly into the vapor outlet.